

In the Claims:

1. (Currently Amended) Method for increasing the density of a perovskite, which comprises the steps of:
 - (a) placing a perovskite feedstock in a high-pressure cell of a high pressure/high temperature (HP/HT) apparatus;
 - (b) subjecting said feedstock to pressures in excess of about 2 kbar ~~Kbar~~ and temperatures above about 800° C for time in excess of 3 minutes to produce a ~~a~~^{an}-cubic perovskite product having a density which is greater than said feedstock ~~perform~~; and
 - (c) ~~(b)~~ recovering said perovskite product.
2. (Currently Amended) The method of claim 1, wherein said perovskite ~~is can be~~ represented by the structure, ABO₃, where:
A is one or more of Na⁺, K⁺, RB⁺, Ag⁺, CA⁺², Sr⁺², Ba⁺², Pb⁺², La⁺³, Pr⁺³, Nb⁺³, Bi⁺³, Y⁺³, Hf⁺⁴, or Th⁺⁴; and
B is one or more of Li⁺, Cu⁺², Mg⁺², Ti⁺³, V⁺³, Cr⁺³, Mn⁺³, Fe⁺³, Co⁺³, Al⁺³, Ni⁺³, Rh⁺³, Hf⁺⁴, Ti⁺⁴, Zr⁺⁴, Mn⁺⁴, Ru⁺⁴, Pt⁺⁴, Nb⁺⁵, Ta⁺⁵, Mo⁺⁶ or W⁺⁶.
3. (Currently Amended) The method of claim 2, wherein said feedstock ~~perform~~ is SrRuO₃.
4. (Original) The method of claim 1, wherein said perovskite feedstock is one or more of powder or a ~~perform~~.
5. (Original) The method of claim 1, wherein said perovskite product has a density of greater than about 60% of its theoretical density.
6. (Original) The method of claim 5, wherein said perovskite product has a density of greater than about 60% of its theoretical density.

7. (Currently Amended) The method of claim 1, wherein step (b) is conducted for a time ranging from between about 3 minutes and 24 hours.
8. (Currently Amended) The method of claim 1, wherein said pressure ranges from about 2 to 75 kbar ~~Kbar~~ and said temperature ranges from about 800° to 1600° C.
9. (Currently Amended) The method of claim 7, wherein said pressure ranges from about 2 to 75 kbar ~~Kbar~~ and said temperature ranges from about 800° to 1600° C.
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Currently Amended) Method for increasing the density of a perovskite, which comprises the steps of:

- (a) placing a perovskite feedstock in a high-pressure cell of a high pressure/high temperature (HP/HT) apparatus;
- (b) subjecting said feedstock to pressures in excess of about 2 kbar ~~Kbar~~ and temperatures above about 800 C for time adequate to increase the density of said feedstock ~~perform~~ to above about 60% of its theoretical density; and

(c) (b) recovering said perovskite product having a density above about 60% of its ~~it~~ theoretical density.

20. (Currently Amended) The method of claim 19, wherein said perovskite ~~is can be~~ represented by the structure, ABO_3 , where:

A is one or more of Na^+ , K^+ , RB^+ , Ag^+ , CA^{+2} , Sr^{+2} , Ba^{+2} , Pb^{+2} , La^{+3} , Pr^{+3} , Nb^{+3} , Bi^{+3} , Y^{+3} , Hf^{+4} , or Th^{+4} ; and

B is one or more of Li^+ , Cu^{+2} , Mg^{+2} , Ti^{+3} , V^{+3} , Cr^{+3} , Mn^{+3} , Fe^{+3} , Co^{+3} , Al^{+3} , Ni^{+3} , Rh^{+3} , Hf^{+4} , Ti^{+4} , Zr^{+4} , Mn^{+4} , Ru^{+4} , Pt^{+4} , Nb^{+5} , Ta^{+5} , Mo^{+6} or W^{+6} .

21. (Currently Amended) The method of claim 19, wherein said feedstock ~~perform~~ is SrRuO_3 .

22. (Original) The method of claim 19, wherein said perovskite feedstock is one or more of powder or a perform.

23. (Original) The method of claim 19, wherein said perovskite product has a density of greater than about 90% of its theoretical density.

24. (Original) The method of claim 19, wherein step (b) is conducted for a time ranging from between about 3 minutes and 24 hours.

25. (Currently Amended) The method of claim 19, wherein said pressure ranges from about 2 to 75 kbar and said temperature ranges from about 800° to 1600° C.
26. (Currently Amended) The method of claim 25, wherein said pressure ranges from about 2 to 75 kbar and said temperature ranges from about 800° to 1600° C.